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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,702	12/28/2001	David M. Lee	42390.P13768	2187

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EXAMINER

SHAH, CHIRAG G

ART UNIT PAPER NUMBER

2664

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,702

Applicant(s)

LEE ET AL.

Examiner

Chirag G Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 4, and 7 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "...wherein the completion packet is not required to be received in a particular order in relation to any other packet received at the receiving device" is not described in the specification and/or original claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-4 and 7-10 rejected under 35 U.S.C. 102(e) as being anticipated by Sabaa et al. (U.S. Patent No. 6,389,016).

Referring to claim 1, Sabba discloses in column 2, lines 47 to column 25, figure 1, claim 1 and respective portions of the specification of a method of transporting data between a sending entity and a receiving entity over a data communication system, comprising as disclosed in claim 1 of: receiving a completion packet at a receiving device (receiving each packet transmitted over the data communication system); determining whether the completion packet is expected by the receiving device (reading a group number identifying a group and a sequence number of the received packet and comparing the sequence number with an expected sequence number of the group); and discarding the completion packet if the completion packet is not expected (discarding the received packet when the sequence number of the received packet does not match the expected sequence number) as claim.

Referring to claim 2, Sabaa discloses in figure 7 and respective portion of the specification, where the receiver detects an out-of-sequence error as the sequence number of the received packet does not match the expected number 8 of group 0. The receiver 72 sends a negative acknowledgment to the sender 70, specifying the expected sequence number. Once the sender 70 receives the negative acknowledgement 104, it knows at that point that all sequence numbers up to 7 have been correctly received and it retransmits the packet 100 with sequence number 8, immediately followed by all of the next and higher-numbered packets in the group. Thus, in the event of an out-of-sequence error, the entire group is not resent, only the packets starting at the lost sequence number are retransmitted, thus enabling the receiving entity to

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determine whether the packet corresponds to any outstanding requests (expected) previously issued by the receiving device as claim.

Referring to claim 3, Sabaa discloses in claim 1 and respective portion of the specification of the method of claim 2, further comprising reporting an error condition by means of sending a negative acknowledgement when the sequence number of the received packet is greater than the expected sequence number and the negative acknowledgment sent indicator has not been set as claim.

Referring to claim 4, Sabba discloses in column 2, lines 47 to column 25 and figure 1, 2, claim 1 and respective portions of the specification of a method of transporting data between a sending entity and a receiving entity over a data communication system, comprising as disclosed in claim 1: receiving a completion packet at a receiving device (receiving each packet transmitted over the data communication system); the completion packet including a completion status and a completer identification (as disclosed in figure 2 and respective portion of the specification); determining whether the completion packet includes a completion status other than successful (reading a group number identifying a group and a sequence number of the received packet and comparing the sequence number with an expected sequence number of the group); and storing the completer identification in a first register if the completion status is other than successful (setting a negative acknowledgement sent indicator 38 in figure 1, when the packet is discarded and no negative acknowledgement sent indicator has been set for the group, the negative acknowledgment sent indicator indicating that a negative acknowledgement has been sent and the receiving entity is waiting for a packet with the expected sequence number) as claim.

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Referring to claim 7, Sabba discloses in column 2, lines 47 to column 25 and figure 1, 2, claim 1 and respective portions of the specification of a method of transporting data between a sending entity and a receiving entity over a data communication system, comprising as disclosed in claim 1: servicing a request packet from a requesting device at a completer device (receiving each packet transmitted over the data communication system), the request packet including a requestor identification and a tag (as disclosed in figure 2 and respective portion of the specification); transmitting a completion packet with a completion status other than successful from the completer device to the requesting device if an error condition exists (reading a group number identifying a group and a sequence number of the received packet and comparing the sequence number with an expected sequence number of the group); and storing the requestor identification at a location in the completer device if the error condition exists (setting a negative acknowledgement sent indicator 38 in figure 1, when the packet is discarded and no negative acknowledgement sent indicator has been set for the group, the negative acknowledgment sent indicator indicating that a negative acknowledgement has been sent and the receiving entity is waiting for a packet with the expected sequence number) as claim.

Referring to claim 8, Sabba discloses in figure 1, item 38 (Neg. Ack sent indicator) and 2 and in claim 1 of the method of claim 7, further comprising storing the tag at a location in the completer device if the error condition exists as claim.

Referring to claim 9, Sabba discloses in figure 1, item 38 and in claim 1 of the method of claim 8, further comprising indicating in a register (Neg. Ack sent indicator) in the completer device that a completion packet with a completer status other than successful was transmitted if the error condition exists as claim.

Referring to claim 10, Sabaa discloses in claim 1 and respective portions of the specification of the method of claim 9, further comprising reporting the error condition if it exists by means of sending a negative acknowledgement when the sequence number of the received packet is greater than the expected sequence number and the negative acknowledgment sent indicator has not been set as claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Sabaa in view of Matsumoto et al. (U.S. Patent No. 5,414,717).

Referring to claim 5, Sabaa discloses in figure 1 and in claim 1 of storing the completer identification in a first register if the completion status is other than successful (setting a negative acknowledgement sent indicator 38 in figure 1, when the packet is discarded and no negative acknowledgement sent indicator has been set for the group, the negative acknowledgment sent indicator indicating that a negative acknowledgement has been sent and the receiving entity is waiting for a packet with the expected sequence number). Sabaa however fails to further include indicating in a second register that an unsuccessful completion was received if the completion status is other than successful. Matsumoto teaches in the abstract of a NAK register, for storing

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negative acknowledgment data. Matsumoto further discloses in claim 1 and respective portions of the specification of including a NAK register which stores negative acknowledgment data having higher priority than acknowledgment data, showing that a transmission from a transmission side terminal. Therefore, it would have been obvious to incorporate the teachings of Matsumoto into Sabaa's invention in order to control resending a transmission and reduce overhead and latency.

Referring to claim 6, Sabaa discloses in claim 1 and respective portions of the specification of the method of claim 5, further comprising reporting an error condition if the completion status is other than successful by means of sending a negative acknowledgement when the sequence number of the received packet is greater than the expected sequence number and the negative acknowledgment sent indicator has not been set as claim.

Response to Arguments

7. Claims 1, 4, and 7 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "...wherein the completion packet is not required to be received in a particular order in relation to any other packet received at the receiving device" is not described in the specification and/or original claims. In addition, there is no requirement written in the specification preventing the completion packet to be received in a particular order in relation to any other packet received at the receiving device.

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8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703)305-9051, (for formal communications; please mark "EXPEDITED
PROCEDURE)

Or:

(703)305-5403 (for informal or draft communications, please label "PROPOSED"
or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal
Drive, Arlington, VA., Sixth Floor (Receptionist).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G Shah whose telephone number is 703-305-5639. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cgs
May 19, 2004

Chirag G. Shah
Art. Exam.